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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/601,241	01/17/2002	Hidekazu Tanaka	2000-0893A	8749

7590 11/17/2005
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Washington, DC 20006

EXAMINER

LEE, PING

ART UNIT PAPER NUMBER

2644

DATE MAILED: 11/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/601,241

Applicant(s)

TANAKA, HIDEKAZU

Examiner

Ping Lee

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8,9 and 12-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8,9,12-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 8, 9 and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Konno (JP 07162990 A) (this reference has been previously identified as Fumiyasu et al) in view of Olsson (US 5,913,178).

Regarding claims 8, Konno discloses the claimed speaker apparatus in Fig. 2 with the exception of the microphone being placed at a position where the at least sound pressure of resonance occurring in a longitudinal direction, in a latitudinal direction orthogonal to the longitudinal direction, and in a direction orthogonal to both the longitudinal direction and the latitudinal direction of the acoustic pipe is low enough so as not to cause oscillation and wherein the microphone being placed at a position where sound pressure of at least one of a second and third pipe resonance in the longitudinal direction, in the latitudinal direction and in the direction orthogonal to both the longitudinal direction and the latitudinal direction of the acoustic pipe is low enough so as not to cause oscillation, and where at least sound pressure of a resonance occurring in a closed space of the acoustic pipe is low enough so as not to cause oscillation.

Olsson teaches that an acoustic pipe would cause oscillation due to resonant frequencies within the pipe. By placing microphone at selected location, Olsson teaches that this problem would be minimized. Olsson further teaches how to

determine the second and third pipe ("n" is a variable, which could be any integer) resonance in the longitudinal direction (col. 4, lines 46-56). The length used for the equation in Olsson is in longitudinal direction. So the sound pressure of resonance occurring in a longitudinal direction in Olsson is inherently low enough so as not to cause oscillation when the microphone is being placed at a determined position.

Olsson teaches how to determine the location of the second resonance in the longitudinal direction (col. 5, lines 1-12).

Thus, it would have been obvious to one of ordinary skill in the art to modify Konno's speaker apparatus in view of Olsson by testing and selecting a microphone's position for minimizing at least one of a second and third pipe resonance in the longitudinal direction, in the latitudinal direction and in the direction orthogonal to both the longitudinal direction and the latitudinal direction of the acoustic pipe so as not to cause oscillation,

Regarding claim 9, although neither Konno nor Olsson shows a bracket for mounting the microphone, one skilled in the art would have expected that the microphone would work equally well by using any well known fastening means, including a bracket, to mount the microphone inside the pipe in front of the speaker.

Regarding claims 12-15, Konno shows the adder/subtractor (11) and a microphone amplifier (10) and a subtractor (8).

Response to Arguments

3. Applicant's arguments filed 9/1/05 have been fully considered but they are not persuasive.

Applicant argued that the present invention specifies the placement of the microphone is a three-dimensional direction of the pipe.

Konno shows the microphone being placed in the pipe which has a three-dimensional space. Therefore, the placement of the microphone is in a 3-D directional of the pipe.

Applicant argued that Olsson fails to teach how to minimize at least one of a second and third pipe resonance.

Olsson indeed teaches how to perform this. The equation defined on col. 4, lines 52-56 allows any one skilled in the art to determine the at least one of a second and third resonance. On col. 5, lines 1-12, Olsson specifies how to place the microphone to minimize the second resonance. Therefore, Olsson provides the teaching for modifying Konno's system.

Applicant further argued that Olsson requires the precise placement of attenuating material to remove resonance peaks.

This argument is based on applicant's own disclosure. It is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

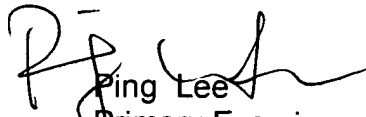
Art Unit: 2644

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 571-272-7522.

The examiner can normally be reached on Monday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ping Lee
Primary Examiner
Art Unit 2644

pwl